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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,274	02/01/2001	Daniel W. Hawof	HAWTOF8-1-1	3726

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EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/762,274	HAWTOF ET AL. <i>(Signature)</i>
	<b>Examiner</b>	<b>Art Unit</b>
	John Hoffmann	1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on \_\_\_\_ .

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-31 is/are pending in the application.

4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.

5)  Claim(s) 1-16 is/are allowed.

6)  Claim(s) 26-30 is/are rejected.

7)  Claim(s) 17-19 is/are objected to.

8)  Claim(s) 1-31 are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) 5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6)  Other: \_\_\_\_\_

### **DETAILED ACTION**

It is unclear whether the proper page 19 was submitted to the Office. Attached to this action is the only page 19 (claims 7-13) that the Office has in the application. It is these claims which are examined presently.

#### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-19 and 26-31, drawn to a method of forming soot for glass, classified in class 65, subclass 377.
- II. Claims 20-25, drawn to an apparatus for forming soot, classified in class 65, subclass 484.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used to practice another process, such as one where there is no transitioning between liquids.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Kevin Able on 28 May 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-19 and 26-31. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26, lines 23 refers to "a group of liquids consisting of a liquid reactant or a second liquid. " This is not understood because a group of liquids requires more than one liquid - however the "consisting of" language prevents any additional liquid (i.e. it

can have only one liquid). It is unclear if the group has one liquid or more than one liquid.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support for the second liquid comprising a halide-free liquid. Examiner could find no support in the specification for this limitation. It is a negative limitation that appears to be to overcome the prior art

### ***Specification***

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### ***Claim Objections***

Claims 17-19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 17 is directed to step D, however, there is no step D in claim 1. Claims 17-19 are not further treated on their merits.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Blankenship 4230744.

See the sole figure of Blankenship and the associated text. The liquid which is nebulized at 40 comes from the "group of liquids" 18, 20 and 22. Each liquid (18, 20 and 22) is "consisting of" a liquid reactant. The conduit between 38 and 40 is deemed to be the common conduit. There is no indication of exposure to air in Blankenship. It would have been obvious to have the Blankenship apparatus in air, so that a human can operate it without breathing equipment. It is well understood that air has humidity. The entire apparatus is deemed to be a "combustion zone" because it directed to creating a combustion process. As to step b): from col. 6, lines 31-48, it is clear that

the liquid that flows through the conduit is a different liquid. It is clear that the new liquid is "not delivered during step a)". This liquid is deemed to be the second liquid. Step c) is clearly met.

Claims 28 and 29: It is deemed that the instant the composition is changed, it is a decrease in the first composition flow, and an increase in the flow in whatever material flows next. One can arbitrarily designate any of the liquids to be the liquid reactant and other liquid to be the second liquid.

Claim 30: it would have been obvious to have steady state of liquid flow during process, because if one changes the amount of mass flow, that would change the flame characteristics and that could lead to a change in the temperature of the burner and thus the chemistry of the reaction. It would have been obvious to maintain everything as constant as possible.

Claim 31 is met in that it adds nothing.

#### ***Allowable Subject Matter***

Claims 1-16 and 31 are allowed. The prior art discloses the invention as it pertains to siloxanes and other non-alkoxides. There would be no motivation to substitute an alkoxide in the prior art.

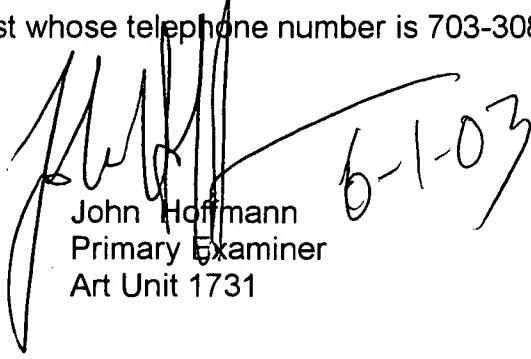
***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morse, Kropfield, Meyer, Nakagawa, Tunison, Anderson, and Blackwell are cited as being directed to the disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7115 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

6-1-03